

REMARKS

Claims 1, 3, 4, 6-13 and 18-21 are rejected. Claims 14-17, 22, 24, 25 and 27-29 are withdrawn from consideration. Claims 1, 3, 4, 6-13 and 18-21 are presently pending in the application. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

Rejection Of Claims 1, 3, 6-11, 18, 20 and 21 Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1, 3, 6-11, 18, 20 and 21 under 35 U.S.C. 103(a) as being unpatentable over Tang et al. (WO 00/53406) in view of Peternell et al. (US 6,420,016), as Tang discloses an ink jet receiving medium having a gelatin from animal skin or bones containing ink receiving layer and Peternell discloses that animal skin also includes pigskin, acid or alkaline processed gelatin, and gelatin derivatives such as phthalated, acetylated, carbamoylated, and succinated gelatin can be used for this application, different types of gelatin can be used in combination, the strength is preferably in the range of 150-350 bloom, mordant is added to the ink receiving layer to improve water resistance of the printed image, the ink jet receiving medium further comprises an overcoat layer on the top of the ink receiving layer, and the ink receiving layer further comprises hydrophilic polymer.

Tang discloses a high gloss ink jet receiving medium with fast ink dry time, good dye fade resistance, good dimensional stability, and good durability. The coating comprises a polypeptide such as gelatin or modified gelatin with plasticizers to reduce the curl of the coated sheets at low humidity. A polyurethane dispersion is incorporated into the coating to increase the flexibility of the coating at low humidity and to reduce the tack of the coating at high humidity. The polymers can be crosslinked with one or a combination of crosslinkers such as trivalent metal ions, polyfunctional aziridine, and polyamide-epichlorohydrin resin. Tang fails to mention the use of a succinylated pigskin gelatin for use in the absorbent layer to improve laminate adhesion.

Peternell discloses a recording sheet for ink jet printing comprising a support, onto which are coated, in addition to optional auxiliary layers, at least one gelatin containing absorption layer for the fixation of the ink liquid and on top of the absorption layer one or more ink receiving layers, characterized in that the gelatin containing absorption layer comprises micelle forming compounds in a quantity from 10% by weight to 50% by weight relative to gelatin. The invention

provides recording sheets for ink jet printing showing high ink absorbency, high ink absorption rate, excellent image quality, short drying times and "photo feel".

The present invention comprises an ink recording element having at least one laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The element yields excellent ink imaging performance for a wide range of commercially available printing systems, especially with respect to laminate adhesion, while still maintaining such properties as image quality and differential gloss.

To establish a prima facie case of obviousness requires, first, there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combines) must teach or suggest all the claim limitations.

Tang fails to disclose the use of a succinylated gelatin or succinylated pigskin gelatin to enhance the laminate adhesion of a solvent absorbing layer. Therefore, the reference fails to provide any motivation for using, specifically, succinylated pigskin gelatin in an ink absorbing layer to improve laminate adhesion. The reference to Peternell fails to mention laminate adhesion. Peternell fails to mention succinylated gelatin. Peternell also fails to disclose that a succinylated pigskin gelatin, when incorporated into a solvent absorbing layer of an ink recording element, will provide improved laminate adhesion.

Neither does the reference to Tang provide any likelihood of success in improving laminate adhesion with the use of, specifically, succinylated pigskin gelatin. Since Peternell fails to mention succinylated gelatin, Peternell also fails to provide any likelihood of success in improving laminate adhesion with the use of pigskin-sourced succinylated gelatin.

Finally, the reference to Tang fails to include the limitations of the claim specific to improved laminate adhesion and succinylated gelatin, prepared from pigskin. Therefore the Applicants believe a prima facie case of obviousness has not been made.

As indicated by the Examiner, a prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is

known to be result-effective, are unexpectedly good. The specification provides evidence of surprising results with the use of succinylated pigskin gelatin. Table 2 on page 18 of the specification illustrates that the peel force required to remove layers of succinylated pigskin gelatin was markedly higher than the peel force required to remove layers containing unmodified gelatins as well as other gelatins made from pigskin. It was the unique combination of pigskin gelatin and succinylated gelatin into a single succinylated pigskin gelatin that provided the greatly improved laminate adhesion.

In summary, the Applicants believe that, in the absence of any disclosure relating to laminate adhesion or the unique performance of succinylated pigskin gelatin, a prima facie case has not been made. In the event that such a case has been made, the Applicants have provided evidence of surprising results. Therefore, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

The Examiner also states that, with respect to the claimed laminate adhesion property, the combination of Peternell and Tang teaches an article substantially identical to the claimed article, thus the article functions in the same manner as the claimed article. The Applicants respectfully disagree. As indicated by the attached Declaration of Romano, paragraphs 4 and 5, one of ordinary skill in the art would understand that a difference exists between succinylated pigskin gelatin and succinylated gelatin from other sources, and, as a result would recognize that the article of Peternell and Tang is not identical to the claimed article and would not function in the same manner.

Rejection Of Claims Claim 9 Under 35 U.S.C. §103(a):

With respect to claim 9, the Examiner indicates that Tang fails to disclose the amount of each type of gelatin when using combination of different types of gelatin, however, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results and one of ordinary skill in the art would have been motivated to adjust the content of different types of the gelatin to optimize ink drying time, water resistance and durability of the ink receiving layer.

The Applicants believe that Claim 9 benefits from dependency on Claim 1, which, as discussed above, is novel and unobvious.

Rejection Of Claims Under 35 U.S.C. §103(a):

The Examiner has rejected Claims 1, 3, 4, 10 and 21 under 35 U.S.C. 103(a) as being unpatentable over Poerschke (DE 197 21 238 AI) in view of Peternell et al. (US 6,420,016 131), as Poerschke discloses an ink jet recording medium comprising an ink receiving layer containing modified bone or skin gelatin, Peternell discloses skin may include pigskin, the gelatin is modified with alkylene succinic acid, wherein the alkylene group has 8-25, preferably 8-16 carbon atoms, dodecenylsuccinic acid is a preferred example, and, since the gelatin used in the prior art is substantially identical to the gelatin used in the current application, the gelatin of the prior art inherently possesses the claimed bloom strength.

Poerschke discloses a succinylated gelatin for use in inkjet paper to produce a gelatin with improved miscibility with polymeric components found in inkjet coatings and which can maintain the desired properties of high gloss, color fastness, freedom from cracking, short dry time, absence of tackiness, low spotty appearance and which is easy, reproducible and low-cost to manufacture. Poerschke fails to disclose laminate adhesion or the use of succinylated pigskin gelatin to produce improved laminate adhesion.

Peternell discloses a recording sheet for ink jet printing comprising a support, onto which are coated, in addition to optional auxiliary layers, at least one gelatin containing absorption layer for the fixation of the ink liquid and on top of the absorption layer one or more ink receiving layers, characterized in that the gelatin containing absorption layer comprises micelle forming compounds in a quantity from 10% by weight to 50% by weight relative to gelatin. The invention provides recording sheets for ink jet printing showing high ink absorbency, high ink absorption rate, excellent image quality, short drying times and "photo feel".

The present invention comprises an ink recording element having at least one laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The element yields excellent ink imaging performance for a wide range of commercially available printing systems, especially with respect to laminate adhesion, while still maintaining such properties as image quality and differential gloss.

To establish a prima facie case of obviousness requires, first, there must be some suggestion or motivation, either in the references themselves, or in

the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combines) must teach or suggest all the claim limitations.

The reference to Poerschke fails to mention laminate adhesion. Poerschke also fails to disclose that a succinylated pigskin gelatin, when incorporated into a solvent absorbing layer of an ink recording element, will provide improved laminate adhesion. Poerschke also fails to disclose or teach anything relating to differences in succinylated gelatins derived from different sources, especially with respect to improvements in laminate adhesion. The reference to Peternell fails to mention laminate adhesion. Peternell fails to mention succinylated gelatin. Peternell also fails to disclose that a succinylated pigskin gelatin, when incorporated into a solvent absorbing layer of an ink recording element, will provide improved laminate adhesion. Therefore, the references, alone or in combination, fail to provide any motivation for using, specifically, pigskin-derived succinylated gelatin in an ink absorbing layer to improve laminate adhesion.

Neither does the reference to Poerschke provide any likelihood of success in improving laminate adhesion with the use of, specifically, succinylated pigskin gelatin, as the reference fails to disclose or teach anything relating to differences in succinylated gelatins derived from different sources. Since Peternell fails to mention succinylated gelatin, Peternell also fails to provide any likelihood of success in improving laminate adhesion with the use of pigskin-sourced succinylated gelatin.

Finally, the references to Poerschke and Peternell fail to include the limitations of the claim specific to improved laminate adhesion and succinylated gelatin, prepared from pigskin. Therefore the Applicants believe a prima facie case of obviousness has not been made.

As indicated by the Examiner, a prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. The specification provides evidence of surprising results with the use of succinylated pigskin gelatin. Table 2 on page 18 of the specification illustrates that the peel force required to remove layers of succinylated pigskin gelatin was markedly higher than the peel force

required to remove layers containing unmodified gelatins as well as other gelatins made from pigskin. It was the unique combination of pigskin gelatin and succinylated gelatin into a single succinylated pigskin gelatin that provided the greatly improved laminate adhesion.

In summary, the Applicants believe that, in the absence of any disclosure relating to laminate adhesion or the unique performance of succinylated pigskin gelatin, a prima facie case has not been made. In the event that such a case has been made, the Applicants have provided evidence of surprising results. Therefore, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

The Examiner also states that, with respect to the claimed laminate adhesion property, the combination of Poerschke and Peternell teaches an article substantially identical to the claimed article, thus the article functions in the same manner as the claimed article. The Applicants respectfully disagree. As indicated by the attached Declaration of Romano, paragraphs 4 and 5, one of ordinary skill in the art would understand that a difference exists between succinylated pigskin gelatin and succinylated gelatin from other sources, and, as a result would recognize that the article of Peternell and Tang is not identical to the claimed article and would not function in the same manner.

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Peternell discloses a recording sheet for ink jet printing comprising a support, onto which are coated, in addition to optional auxiliary layers, at least one gelatin containing absorption layer for the fixation of the ink liquid and on top of the absorption layer one or more ink receiving layers, characterized in that the gelatin containing absorption layer comprises micelle forming compounds in a quantity from 10% by weight to 50% by weight relative to gelatin. The invention provides recording sheets for ink jet printing showing high ink absorbency, high ink absorption rate, excellent image quality, short drying times and "photo feel".

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As discussed above, Tang and Peternell, alone or in combination, fail to provide any motivation for using, specifically, pigskin-derived succinylated gelatin in an ink absorbing layer to improve laminate adhesion. Neither do Peternell and Tang provide any likelihood of success in improving laminate

adhesion with the use of, specifically, succinylated pigskin gelatin. Finally, the references fail to include the limitations of the claim specific to improved laminate adhesion and succinylated gelatin, prepared from pigskin. Therefore the Applicants believe a prima facie case of obviousness has not been made.

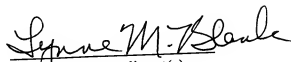
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It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Respectfully submitted,


Attorney for Applicant(s)
Registration No. 42,334

Lynne M. Blank/ct
Rochester, NY 14650
Telephone: 585-477-7418
Facsimile: 585-477-1148